MACHINE DESIGN

Index To Volume 14, Jan. To Dec. 1942

The Penton Publishing Co. Penton Building, Cleveland

A

Absorbers, shock, mass of balls replaces fluid in°, July p.128
Accoustic units on fences for protection°, June p.60
Actuator, Switch (*see Switches*):
Adhesive nameplate substitutes for metal°, June p.130
Aircraft:
  Airacobra, fabric attachment for cannon-carrying°, May p.56
  bomber B-26, Martin, illustrated°, Feb. p.84
  bomber Mars, for Navy, illustrated°, Jan. p.72
  booster coils for engines for°, Oct. p.238
  BT-1 Douglas dive bomber illustrated°, Jan. p.71
Aircraft Cable Lug:
  lightweight, collet-type°, July p.102
  new type announced°, Sept. p.118
Aircraft carrier, Hornet, illustrated°, Jan. p.72
Aircraft circuit breaker for lighting, motor°, June p.124
Aircraft clamps, air, miniature, announced°, Dec. p.130
Aircraft Cowl Fasteners (*see Fastenings, Cowl*):
Aircraft cutout, reverse current°, April p.178
Aircraft dynamotors for communication systems°, June p.112
Aircraft electronic device signals ice formation°, Nov. p.56
Aircraft Engines (*see Engines, Aircraft*):
Aircraft fabric attachment on wing of Airacobra°, May p.56
Aircraft fighter plane, Grumman, illustrated°, Jan. p.72
Aircraft flying jeep announced°, Dec. p.162
Aircraft, forgings utilized for propeller blades°, Nov. p.64
Aircraft miller for engine connecting rod caps°, March p.75
Aircraft Motors, (*see Motors*):
Aircraft nuts, self-locking, in strips°, June p.114
Aircraft parts formed by metal stretcher°, June p.62
Aircraft, pursuit plane, illustrated°, Feb. p.85
Aircraft, Polaroid screens for lights in cockpit°, Feb. p.61
Aircraft relays, (*see Relays*):
Aircraft, Sky Leviathan designed by Martin°, July p.81
Aircraft, solenoid contactor, for remote control°, Dec. p.138
Aircraft, steel and wood replace aluminum in plane, June p.78
Aircraft Switches (*see Switches*):
Aircraft tubing, plastic, for insulation°, July p.106
Aircraft valve, relief, for hydraulic system°, Aug. p.120
Alloys (*see also under specific type*):
  by principal constituents, index of, Oct. p.148
  conserved by new NE steels, July p.65
  directory of metals and alloys, Oct. p.123
  metal bonding, announced°, July p.114
Aluminum:
  plastic replaces, in dial and wheel°, Aug. p.98
  replacement of, in dial telephones,° Jan. p.38
Ammeter determines load on motors°, Dec. p.90
Annealing, flame, machine for, illustrated°, March p.75
Arbor expands by compressed air°, Dec. p.122
Armor plate, utilization of spring steel for°, Feb. p.52
Authors:
  Bennett Sr., Nelson K.—"Designing Accelerated-Motion Cylindrical Cams," Part I, June p.87; Part II, July p.84
  Binder, R. C.—"Applying Mobility Method to Shaft Vibration," Feb. p.62, March p.57
  Broadwin, Sampson—"Combining Styling with Engineered Design," Feb. p.66
  Birdsall, G. W.—"Composite Stampings Relieve Critical Shortages," Dec. p.113
  Bolz, H. A.—"Simplifying Graphical Solution of Linkages," May p.68
  Boston, O. W.—"Calculating Machine Tool Power Requirements," June p.79
  Caldwell, G. A.—"Which Drive Serves Best for Speed Control?" May p.71
  Chalmers, Bruce—"Grains of Sand Determine Hardness," Feb. p.82
  Carmichael, Colin—
    "Consider Glass in Meeting Materials Shortage," Aug. p.85
    "Felt Meets Wartime Demands," Oct. p.65
    "Malleable Iron Fills Wartime Demands," Dec. p.96
    "Mobilizing the Graduate into War Work," April p.52
  Carter, W. F. and R. E. Orton—"Wartime Metallurgy Conserves Strategic Materials," Part I, Aug. p.63; Part II—"Crystalline Structure," Sept. p.70; Part III—"Iron and Carbon," Oct. p.69; Part IV—"Quenched and Tempered Carbon Steel," Nov. p.82; Part V—"Hardenability," Dec. p.91
  Clark, John A.—"Silent Steel Gear Extends Drive Life," April p.156
  Cole, Otis D.—"How Synthetic Rubbers Meet Current Demand," July p.76
  Davis, John V.—"Utilizes Standard Drive Units," April p.116
  Delmonte, John—
    "Cold-Molded Plastics," Nov. p.75
    "Cost Factors Governing Design for Plastics," March p.70
    "Impregnated Plywood Becomes War Material," July p.53
  Donahue, F. J.—"Pilot Control Regulates Strip Tension," April p.160
  Doolan, James P.—"Selecting Size and Number of Bolts in Tension," Feb. p.87
  Douglass, R. D. and J. M. Dunford—"Selecting Helical and Worm Gearing," Dec. p.119
  Dunford, J. M. and R. D. Douglass—"Selecting Helical and Worm Gearing," Dec. p.119
  Elberty, R. S.—"Build in Controls for Wartime Economy!" April p.103
  Etchells, E. B. and A. F. Underwood—"Practical Aspects of Bearing Design," Part I—"Lubrication, Sept. p.84; Part II—"Basic Materials." Oct. p.74
  Frost, D. K.—"Sequence Operations Speeded with Solenoids," April p.113
  Gartmann, H.—"Pump Design Affords Wide Scope in Application," April p.55
  Goodier, J. N.—"Increasing Design Tempo through Model Analysis," Sept. p.62
  Greve, John W.—
    "Basic Considerations in Selecting Screens," March p.61
    "Primary Considerations in Selecting Fittings," May p.58
    "Synthetics Increase Demands on Pressure Vessels," June p.63
    "Where Shaded Pole Motors Fit," Nov. p.79
    "Which Thermostat?" Part I—"Bimetals, Pyrometers," Aug. p.71; Part II—"Pressure Types," Sept. p.66
  Grosser, Christian E.—
    "Applying Hydraulic Servo Circuits in Machines," April p.122
    "Controlling Pulsations in Hydraulic Equipment," Dec. p.108
    "Designing Hydraulic Servo-Circuits," Jan. p.52
    "Hydraulic Leakage Can Be Controlled," Aug. p.70
  Hardy, Vaughn H.—"Fitting Miniature Motors To the Job," April p.117
  Herchenroeder, L. W.—"A-C Drive Simplifies Speed Control," April p.162
  Hoey, W. B.—"Basic Do's and Don't's in Applying Plastic Moldings," Jan. p.47
  Howell, John D.—"Playing Hob with Involute Gears!" April p.106
  Illing, Hans A.—"Design of Sections for Low Loads," Data Sheet, Jan. p.75
  Jacobsen, Einar—"Mower Drive Is Designed for Minimum Maintenance," April p.115
  Keller, H. C.—"War Necessitates Use of Alternative Parts," April p.158

°Denotes short articles of less than one page.

Keys, Walter C.—"Isolating Vibration through Use of Rubber," Feb. p.77
Kloid, H. W.—"Dual Pneumatic Drive Speeds Automatic Machine," April p.99
Korfmann, Fred W.—"Carbon Offers Solution to Materials Problems," May p.61
Kosten, C. W. and C. Zwikker—"Simplifying Design of Rubber Mountings," Jan. p.66
Kux, James J.—"Designing Versatile Press for Powder Metal Parts," Oct. p.59
Latshaw, Elmer—
"Design Data for Rubber Mountings," Part II, (Data Sheets), May p.85
"Designing Mountings for Rubber under Shear," April p.173
Lubahn, J. D. and G. Sachs—"Tests Reveal Stress Raiser Effects," Dec. p.104
Marin, Joseph—
"Charts Aid in Determining Plate Thickness," March p.66
"Code for Working Stresses Facilitates Design," Part I—"Static Stresses," Nov. p.70; Part II—"Fatigue Stresses," Dec. p.99
"Designing for Bending, Twisting and Axial Loads," Part I—"Static Stresses," Sept. p.79; Part II—"Fatigue Stresses," Oct. p.78
"Designing High-Pressure Vessels and Piping," May p.77
"Design Shrink-Fit Assemblies," Part I—June p.68; Part II—July p.72; Part III—"Fatigue Stresses," Aug. p.79
"Designing Short Beams," Feb. p.69
"Determining Wall Thickness for Pressure Vessels," April p.59
"Safe Speeds for Flywheels!" Jan. p.41
Miller, John L.—"Redesign Speeds Gun Production," Dec. p.83
Moore, A. J.—"High Production Demands Accurate Braking," March p.50
Morris, Charles H.—"War Needs Inspire Siren Design," Sept. p.57
Moslander, Kenneth D.—
"Conversion for War—Design's Great Opportunity!" April p.43
"Does Centrifugal Casting Offer the Alternative?" June p.74
"How Metallurgy Affects Deep-Drawing," Jan. p.60
"War Broadens Scope of Designers," May p.53
Neidhart, John J.—"Wartime Schedules Make Adequate Lighting Essential," March p.54
Nelson, Donald M.—"Facing the Facts," March p.45
Osborn, R. C.—"Substitutes—Replacements—Alternatives," Feb. p.73
Orton, R. E. and W. F. Carter—"Wartime Metallurgy Conserves Strategic Materials," Part I, Aug. p. 63; Part II—"Crystalline Structure," Sept. p.70; Part III—"Iron and Carbon," Oct. p.69; Part IV—"Quenched and Tempered Carbon Steel," Nov. p. 82; Part V—"Hardenability," Dec. p.91
Orton, R. E.—"War Substitutions Can Be Permanent!" June p.55
Riley, Homer W.—"Crusher Poses Severe Drive Problems," April p.116
Rose, J. J.—"Valve Control Simplifies Casting Machine," April p.110
Sachs, G. and J. D. Lubahn—"Tests Reveal Stress Raiser Effects," Dec. p.104
Talbourdet, Guy J.—"Graphical Analysis of Planetary Gear Systems," Part I—Aug. p.93; Part II—Sept. p.91; Part III—Oct. p.207
Tech, Kurt—"Shell Lathe Design Jumps Ahead," Nov. p.59
Underwood, A. F. and E. B. Etchells—"Practical Aspects of Bearing Design," Part I—"Lubrication," Sept. p.84; Part II—"Basic Materials," Oct. p.74
Wahl, A. M.—
"Combining Maximum Spring Deflection with Minimum Space," Jan. p.57
"Eliminating Surging in Helical Springs," April p.47
"When Springs Are Statically Loaded," July p.67
"Which Spring Material?" Nov. p.87
Wellauer, E. J.—"Substituting Materials in Gear Design," Nov. p.66
Wise, B. L.—"War Needs Speeded by Resistance Welding," July p.61
Woodling, George V.—
"Invention—War Inspires, Law Protects!" Feb. p.55
"Pending Legislation Aims at Wartime Procedure," Sept. p.75
Zwikker, C. and C. W. Kosten—"Simplifying Design of Rubber Mountings," Jan. p.66

B

Babbitt Metals:
high strength, for bearings°, Jan. p.86
new base of°, Oct. p.228
Battleship, U. S. Texas, illustrated°, Jan. p.72
Beams in structures, designing short, Feb. p.69
Bearings:
balanced pressure seal applicable to °, July p.108
babbitt metal for, high strength, Jan. p.86
ball, lubrication of, March p.82
centralized lubrication for°, Feb. p.100
covers for, standard, announced°, July p.102
hydraulically controlled in grinding wheel°, March p.49
lead-base bearings°, July p.108
lubrication considerations in design of, Sept. p.84
materials, basic, in design of, Oct. p.74
molded fabric, oil lubricated°, Dec. p.126
porous iron, conserve copper°, Feb. p.86
radial and pivot, nonmagnetic, available°, Aug. p.110
seizure affected by surface finish, Aug. p.84
spot-welded, announced°, July p.104
sprayed to give exact characteristics°, Dec. p.90
Belting:
cord, multiple, announced°, June p.110
for vehicle motors°, Nov. p.124
utilized in dry cleaning unit°, Feb. p.154
Beryllium copper springs developed°, Jan. p.94
Bimetals:
coils control gages, patent for°, Feb. p.138
pyrometers, selection of, for thermostats, Aug. p.74
thermostatic, developed°, June p.114
Blackening for copper alloys introduced°, June p.128
Block, guide, adjustable fairlead°, Dec. p.142
Blower, has universal mounting°, Dec. p.142
Blueprint developer, noncorrosive°, Dec. p.146
Blueprint dryer for engineering department°, Sept. p.122
Blueprint file cabinets, wooden, announced°, July p.116
Board, portable tracing, announced°, April p.192
Bolts, how to select for tensile loads, Feb. p.87
Bomber:
B-26, Martin, described and illustrated°, Feb. p.84
BT-1, Dive, Douglas, illustrated°, Jan. p.71
Mars, long-range Navy, illustrated°, Jan. p.72
Booster coils for aircraft engines°, Oct. p.238
Booster mechanism on textile loom, patent for°, May p.128
Bottle-filling machine, latching system in°, June p.61
Bottling beverages, blackout of light facilitates inspection°, Aug. p.68
Borer, horizontal, variable speed°, Nov. p.91
Borescope for visual inspection of tiny borings and fittings°, Jan. p.45
Boring and turning mill illustrated°, Dec. p.117
Brakes:
electric-hydraulic, offered°, Nov. p.120
hydraulic, simplified system, patented°, April p.206
mechanical and electric°, March p.50
self-acting, patented°, Oct. p.250
Braking, accurate, demanded by high production, March p.50
Braking improved by multiple disks°, June p.146
Brass, replaced by stainless-clad in food-handling°, May p.88
Breakers, Circuit:
compressed air operates°, Nov. p.144
for airplane lighting, motors, etc.°, June p.124
for resistance welding units°, April p.178
provide protection°, Nov. p.116

C

Cabinets, blueprint file, wooden, announced°, July p.116
Cable, electric, reclamation of rubber and metal°, Sept. p.60
Cable lug for aircraft use°, July p.102
Calculations:
beams, designing short, Feb. p.68
bolts, how to select for tensile loads, Feb. p.87
designing of sections for low loads, (data sheet), Jan. p.75
dimensional analysis for testing, Sept. p.62
drill sizes, circumference, area, diameter of (data sheet), March p.77
gears, involute, how to obtain advantages of, April p.106
graphical solution of linkages simplified, May p.68
mountings, rubber, simplifying design of, Jan. p.66
piping and pressure vessels, determining stresses, May p.77
plate thickness, charts aid in determination of, March p.66
power needs for machine tool requirements, June p.79
pressure vessels, stress determination in, April p.59
pumps, centrifugal, specifying for special use, April p.55
rubber mountings, designing of (data sheets), April p.173
safe speeds for flywheels, Jan. p.41
Servo-circuits, designing of, hydraulic, Jan. p.52
shrink-fits, designing of, Part I—June p.68; Part II—July p.72; Part III—fatigue stresses, Aug. p.79
springs, combining maximum deflection with minimum space, Jan. p.57
springs, statically loaded, discussed, July p.67
stresses, code for working, facilitates design, Part I—static stresses, Nov. p.70; Part II—fatigue stresses, Dec. p.99
stresses, design for bending, twisting and axial loads, Part I—static stresses, Sept. p.79; Part II—fatigue stresses, Oct. p.78
vibration isolation through use of rubber, Feb. p.77
vibration, linear, applying mobility method to, March p.57
vibration, shaft, applying mobility method to, Feb. p.62
Cam:
accelerated-motion cylindrical, designing of, June p.87

°Denotes short articles of less than one page.

Engineering Fatigue

follower, changes in direction of displacement°, March p.118
for thermostat temperature control°, April p.46
latch reduces friction in bottle-filling machine°, June p.61
mechanism on high-cycle milling machine°, Feb. p.60
rotating, for screening or sizing°, April p.46
slackness taken by device (patent)°, July p.126
Can filling, control cabinet for°, May p.57
Carbon and iron, conserving of, Oct. p.69
Carbon, considerations for specifying as structural material, May p.61
Carrier for aircraft, Hornet, illustrated°, Jan. p.72
Caster, heavy-duty, industrial°, Sept. p.116
Casting process simplified by valve control, April p.110
Castings, centrifugal, application of, June p.74
Chain:
built-in, in reducer, announced°, Aug. p.108
drive in mower, for minimum maintenance, April p.115
sprocket mechanism holds surface speed constant°, June p.148
Circuit breakers (*see Breakers, circuit*):
Circuits, servo-, designing of hydraulic, Jan. p.52.
Clamps:
air, miniature, for aircraft°, Dec. p.130
automatic, inertia, on a lathe°, Dec. p.89
conduit, with speed nuts attached°, Feb. p.110
eliminated in revolving joint°, July p.98
Clock, contact-making, available°, Nov. p.112
Cloth:
tension of, maintained in dyeing°, Oct. p.206
tracing, for pencils, announced°, July p.114
Clutches:
impact, patent for°, Sept. p.132
inserts improve operation of°, Dec. p.122
linings renewed, patent for°, Dec. p.160
mower drive, designed for minimum maintenance, April p.115
slip and positive, patent for°, April p.210
two, in marine reduction unit°, March p.80
Coatings (*see also Finishes*):
acid-alkali resistant, announced°, July p.110
olive drab, for machinery and exposed steel°, Aug. p.124
chlorinated rubber°, March p.42
phosphate, for sheet steel developed°, May p.50
rustproofing, for metal°, March p.104
substitutes for galvanized steels, Jan. p.80
temporary, nonadhesive°, Oct. p.224
transparent, temporary, for metal and ceramics°, Aug. p.110
Coils, booster, for aircraft engines°, Oct. p.238
Color identifies plastic spacers and washers°, Sept. p.54
Communication systems, dynamotors for, in aircraft°, June p.112
Compass uses air to drive rotors°, Jan. p.124
Compressors:
multiple steam cylinder°, Sept. p.88
pressure switch for°, Feb. p.94
radial, in refrigeration unit°, Dec. p.116
with V-type gas engine, illustrated°, Aug. p.91
Conduit clamps with speed nuts attached°, Feb. p.110
Conduit is plastic covered°, Nov. p.116
Contactor-relay, magnetic, announced°, June p.104
Contacts:
coated with silver solder°, April p.182
laminated metal, available°, Sept. p.114
rectangular, solid, in rheostat°, Nov. p.114
Controllers:
drum, have overload unit°, Oct. p.240
temperature, self-operating°, Aug. p.126
time schedule, repetitive°, Aug. p.130
Controls (*see also specific item: Breakers, Switches, etc.*):
built-in, for production machines, April p.103
cabinet for can filling machine°, May p.57
electrical, in rifle and machine gun machine°, Feb. p.89
float, liquid-level, announced°, Sept. p.118
for forced warm-air systems, two-speed°, Feb. p.108
for pumps and air compressors°, June p.116
maintain constant speed (patent)°, Nov. p.138
panel for resistance welder, announced°, May p.106
sirens, for turning off and on°, June p.104
stations and enclosures announced°, Feb. p.102
synchronized, in pipe cutting machine°, April p.44
systems for copying operations on machine tools°, Jan. p.118
Conversion for war, design's great opportunity, April p.43
Conveyors:
designed for straight run, patent°, Feb. p.132
mechanical, drive, uses alternative parts, April p.158
tight-end pulleys for°, Sept. p.108
Copper:
blackening for°, June p.128
obtained from shredding tin cans°, July p.50
with beryllium, springs developed°, Jan. p.94
Coupling gear, aligning shaft, announced°, Oct. p.220
Coupling head thermoswitch announced°, Sept. p.112
Counter, electric predetermined, announced°, April p.190
Covers, standard, for bearings, announced°, July p.102
Cowl Fasteners:
for aircraft, high strength°, May p.114
for high tension loads°, Nov. p.122
new type offered°, Sept. p.108
Cranes:
air-controlled, described°, July p.81
revolving, for handling shipyard material°, July p.82
Crankshaft, vibration dampened in, by device (patent), Sept. p.134
Crusher, protected by automatic controls, April p.116
Cutoff, machine illustrated and described°, Nov. p.91
Cutouts:
aircraft, reverse current, announced°, April p.178
assemblies, metal-enclosed, available°, Oct. p.222

D

Damper for vibration on crankshaft, patented°, Dec. p.158
Data Sheets:
cams, designing accelerated-motion, cylindrical, June p.87
design of sections for low loads, Jan. p.75
drill sizes, circumference, area and diameter of, March p.77
gear systems, planetary, graphical analysis of, Part I, Aug. p.93; Part II, Sept. p.91; Part III, Oct. p.207
gears, helical and worm, selection of, Dec. p.119
mountings for rubber under shear, designing, April p.173
mountings, rubber, design data for, May p.85
selecting size and number of bolts in tension, Feb. p.87
universal joints, velocity and acceleration analysis of Nov. p.93
Designers' scope broadened by war, May p.53
Destroyer, Anderson, described and illustrated°, Jan. p.72
Die castings, machine, producers of Oct. p.184
Diesel Engines:
military machines and marine craft, used for°, Feb. p.52
popularity of, increasing°, July p.50
Diesel injection nozzles, accuracy of determined°, Nov. p.63
Dimensional analysis for testing, Sept. p.62
Disks, multiple, improve braking°, June p.146
Distortion, prevention of, method of°, Aug. p.69
Dive bomber, BT-1, Douglas, illustrated°, Jan. p.71
Drawing instruments in three combinations offered°, Sept. p.122
Drill sizes, circumference, area, diameter of (data sheets), March p.77
Drilling machines (illustrated°, March p.75; Aug. p.91
Drives (*see also Hydraulics, Pneumatics, etc.*):
intermittent, for various operations°, Nov. p.136
standard units, in electroplating machine, April p.116
Dry cleaning unit utilizes V-belt drive°, Feb. p.154
Dynamotor, for communication systems°, June p.112

E

Editorial:
"Do It Now—Every Designer Can Improve Materials Situation," Aug. p.92
"Lack of Materials Threatens Success of War Program," Oct. p.203
"Metallurgy Becomes Intimate Part of Design Picture," Nov. p.92
"Send Us More Engineers!" Feb. p.86
"Speed Production Through Automaticity and Control," May p.84
"Stabilization—Not Stagnation!" April p.172
"Standard Parts Utilized To Speed Production Program," July p.83
"Substitutions and Alternatives for Production," June p.86
"Ten Silver Months To Go!" March p.76
"The Designer Comes Through!" Dec. p.118
"Time for Design Changes Is Fast Approaching," Sept. p.92
"Ultimatum to Design!" Jan. p.74
Electrodes (*see Welding*):
tungsten, for etching case-hardened parts°, May p.55
Electrographic analysis of metals°, March p.42
Electrolytic Process:
continuous plating machine for°, March p.48
for plating strip steel°, Aug. p.60
for polishing of silver°, July p.50
machine, standard drive in, April p.116
transfer speeds aircraft production°, Aug. p.146
used in conserving tin°, Nov. p.56
Electronics:
device signals ice formation on plane°, Nov. p.56
liquid level control announced°, Feb. p.106
Electrostatic principle for metallic separation°, Aug. p.68
Enamel:
colored, transparent, for matching plastic parts°, May p.114
vitreous, in strip resistor°, Nov. p.118
Enclosures and control stations announced°, Feb. p.102

°Denotes short articles of less than one page.

Engineering Department Equipment:
blueprint developer, noncorrosive°, Dec. p.146
blueprint dryer is speedy°, Sept. p.122
board, portable tracing, announced°, April p.192
cabinets, blueprint file, wooden, July p.116
case, roller, electrical, for viewing drawings°, March p.49
cloth tracing, for pencils°, July p.114
composing machine, speedy, announced°, May p.120
copying machine, continuous, announced°, April p.192
copying operations, control systems for°, Jan. p.120
drawing instruments, in three combinations°, Sept. p.120
lights, importance of, March p.54
paper, printing, improved°, May p.120
pencil with plastic ferrule, announced°, April p.194
pencil, mechanical drafting°, May p.118
printer, welded, dark room, announced°, May p.118
protection unit, photoelectric°, Sept. p.120
photocopy machine for blueprints°, Dec. p.146
photocopying machine offered°, May p.116
photography used in drafting°, March p.49
whiteprint machine, speedy, announced°, Jan. p.98
Engineers, mobilizing the graduate into war work, April p.52
Engines aircraft:
drafting standards issued by S.A.E., Jan. p.80
forty-two standards approved°, Jan. p.38
on test, provide driving power at Ford plant°, Jan. p.38
pressures, multiple, measured in°, Aug. p.98
Engines, Diesel (*see Diesel Engines*):
Engines, liquid-cooled, production of°, July p.50
Engines, precision control obtained by instruments°, Dec. p.89
Etching machine, for case-hardened parts°, May p.55

F

Fan for ventilating and mechanical drafts°, Aug. p.91
Fan motors available in three models°, March p.100
Fan, variable pitch, for controlling temperature°, Sept. p.116
Fastenings:
bolts, how to select for tensile loads, Feb. p.87
cable lug for aircraft use°, July p.102
clamps, conduit, with speed nuts°, Feb. p.110
Fastenings, Cowl:
for aircraft, high strength°, May p.114
for aircraft, announced°, Sept. p.108
for high tension loads°, Nov. p.122
Fastenings, fabric attachment for wings of plane°, May p.56
Fastenings for military eye glasses°, July p.58
Fastenings, Nut:
cap shaped°, June p.106
right-angle, for blind attachments°, Oct. p.224
self-locking, in strips, for aircraft°, June p.114
self-locking°, Aug. p.126
speed, announced°, Feb. p.110; July p.106
Fastenings, Rivet:
blind, self-plugging, in many forms°, Jan. p.46
holes, dimpled, announced°, Aug. p.122
Fastenings, Washer:
and spacers, color for identification°, Sept. p.54
lock or thrust, custom made°, April p.180
Felt:
and rubber used in strippings°, Nov. p.108
application of, in machines, Oct. p.65
Fiber, vulcanized, for insulation announced°, Feb. p.110
Films, plastic, for details of metal surfaces°, Aug. p.60
Filter, magnetic, permanent, large capacity°, June p.124
Finishes (*see also Coatings*):
coatings, substitutes for galvanized steels, Jan. p.80
colored, transparent, for polished metal°, May p.112
electrolytic blackening of metals°, Jan. p.96
hydrochloric acid for stainless°, June p.52
olive drab, for machinery°, Aug. p.124
paint, fluorescent, for aircraft dials°, April p.46
paint, low visibility, for war department°, April p.192
painting standards for, issued by War department°, June p.52
plastic, temporary, transparent°, Aug. p.110
plating, metal, of acrylic plastics°, Feb. p.52
Finishes, producers of, for machines°, Oct. p.192
Finishes, surface, effect on bearing seizure, Aug. p.84
Finishes, Varnish:
flame-resistant, insulating°, Oct. p.238
insulating, for electrical apparatus°, June p.128
Fits, shrink, designing for, Part I—June p.68; Part II—July p.72; Part III—Fatigue Stresses, Aug. p.79
Fittings:
considerations in selection of, May p.58
inspection of, visual, by borescope°, Jan. p.45
plastic, in all sizes°, Aug. p.112
Flame annealing machine illustrated°, March p.75
Flame hardening machine illustrated°, Oct. p.204
Flax replaces rayon in mechanical packings°, Dec. p.122
Float controls, liquid-level, for motors°, Sept. p.118
Fluorescent paint for aircraft dials°, April p.46
Foil, metal, replaced by plastic sheet material°, Feb. p.52
Food-handling machine, stainless-clad replaces brass in°, May p.88
Ford uses tubing in auto bodies°, May p.50
Forging machine, Feb. p.60
Forgings, producers of, listed, Oct. p.176
Forgings, ribbed-steel, utilized for propeller blades°, Nov. p.64
Fuse marking machine°, June p.85

G

Gages:
controlled by bimetal, patent for°, Feb. p.138
illustrated and described°, Nov. p.90
shell, flat springs on, facilitate operation°, May p.55
strain, how to apply to measure stresses, May p.66
thread, illustrated and described°, May p.82
Gaskets, leather, introduced°, Feb. p.102
Gear changes eliminated in marine reduction unit°, March p.80
Gear changes obviated in lathes°, Feb. p.89
Gear-checking, adjustable sine-bar type°, May p.82
Gear coupling, aligning shaft, announced°, Oct. p.220
Gear Finishers:
conserving of materials in°, Oct. p.204
uses crossed-axis principle°, Sept. p.88
Gear materials substituted in design of, Nov. p.66
Gear mechanism, reduction of (patent)°, Oct. p.250
Gear Shavers:
illustrated and described°, Nov. p.91
largest, for war production°, March p.75
Gear systems, planetary, graphical analysis of, Part I—Aug. p.93; Part II—Sept. p.91; Part III—Oct. p.207
Gears:
differential, in timing mechanism°, June p.60
differential governor, in engine°, May p.56
helical and worm, selection of, Dec. p.119
involute, how to obtain advantages of, April p.106
planetary, speed changes, in instrument°, Sept. p.61
silent, steel, extends drive life, April p.156
Generator (motor) set, for brazing or hardening°, March p.74
Glass:
consideration of, in materials shortage, Aug. p.85
impeller and housing of pump°, Aug. p.85
replaces sapphires in bearings°, Oct. p.56
Government field offices for contract distribution, Feb. p.112
Government priorities field service, March p.106
Government tabulation of critical war materials°, June p.152
Governor and pump control speed of diesel engine°, March p.122
Governors:
differential gear, in engine°, May p.56
Graphite, colloidal, for general lubrication°, Aug. p.126
Grass blitzer keeps airfields in condition°, April p.45
Grinders:
belt, balanced design of°, July p.58
built-in drives and controls in, April p.103
carbide tool, illustrated°, May p.83
hypoid gear, illustrated°, April p.121
internal, for wide range of work°, Oct. p.205
surface, has exceptional accuracy°, June p.84
surface, illustrated°, April p.120
telescopic way guards protect°, March p.80
Grommet, fume and watertight, for hydraulic lines°, Dec. p.124
Guns:
155-millimeter, field, illustrated°, Feb. p.84
barrels of, lathe for tooling°, June p.85
Bofors, malleable castings used in, Dec. p.96
Bofors, speeded by welding°, Dec. p.83
Guards for window for protection°, July p.116
Guards, telescopic, protect grinder°, March p.80
Gyroscope speed, regulated by patented device°, Oct. p.248

H, I

Half-trac M-2, illustrated and described°, Feb. p.84
Hard-faced parts, preventing distortion of°, Aug. p.68
Hardening, flame, of tank parts°, Oct. p.62
Hardening, induction, of shafts conserves materials°, Feb. p.61
Hardness determination, using sand particles, Feb. p.82
Heater, air, for 750-1150 degrees Fahr.° April p.184
Heating element is flexible, low power°, Dec. p.136
Heat Treating:
flaws detected by magnetic test°, Nov. p.63

°Denotes short articles of less than one page.

spring steel, utilization of, for armor plate°, Feb. p.52
temperature control, for cast alloy hulls and turrets°, Feb. p.52
Hose:
thermoplastic, in variable speed transmission°, Oct. p.206
Hydraulic brake system simplified, patent for°, April p.206
Hydraulic centrifugal coolant and circulatory pumps°, March p.104
Hydraulic equipment, controlling pulsations in, Dec. p.108
Hydraulic forging press announced°, July p.82
Hydraulic grommet, fume and watertight°, Dec. p.124
Hydraulic jacks, to raise and lower curbs°, Feb. p.52
Hydraulic lathe, shell-turning, described°, July p.82
Hydraulic leakage can be controlled, Aug. p.70
Hydraulic motors, for military applications°, Aug. p.124
Hydraulic power unit announced°, Aug. p.108
Hydraulic pressure regulator announced°, July p.114
Hydraulic pump, hand auxiliary, uses plastics°, July p.98
Hydraulic servo-circuits, applying in machines, Jan. p.52; April p.122
Hydraulic Valves (*see Valves*):
Hydraulic veneer cutting machine, control of°, June p.150
Hydraulically-controlled bearing for grinding wheel°, March p.49
Indicators:
ratio, fuel, air-flow, announced°, March p.98
reports circuit break°, Aug. p.118
Induction hardening of shafts conserves materials°, Feb. p.61
Inserts improve clutch operation°, Dec. p.122
Inspection:
armor plate and casting°, Oct. p.63
borescope for visual, of tiny borings and fittings°, Jan. p.45
of parts, by fluorescent light°, Nov. p.65
Instruments:
counting, for ammunition rounds for guns°, Jan. p.45
indicating, for precision engine control°, Dec. p.89
microscope for measuring°, July p.60
recording, timing mechanism of°, June p.60
Insulation:
laminated sheets, announced°, May p.106
slot, new thin types°, June p.112
varnish, for electrical apparatus°, June p.128
vulcanized fiber, announced°, Feb. p.110
Iron:
malleable, fills wartime needs, Dec. p.96
porous, in bearings, conserves copper°, Feb. p.96
Iron, steel and nonferrous metals, directory of, Oct. p.123

J, K

Jacks, hydraulic, to raise and lower curbs°, Feb. p.52
Jeep, flying, announced°, Dec. p.162
Joint, revolving, eliminates clamp°, July p.98
Joints, universal, velocity and acceleration analysis of (data sheets), Nov. p.93
Knitting machine, combining styling with engineered design in, Feb. p.66

L

Labels, self-adhesive, easily peeled off°, Nov. p.108
Latching system in rotary bottle-filling machine°, June p.61
Lathes:
change gears obviated in°, Feb. p.89
for tooling large gun barrels°, June p.85
shell, design of, Nov. p.59
shell-turning, hydromatic°, July p.82
turret, heavy-duty, illustrated°, Dec. p.116
turret, illustrated and described°, Sept. p.88
variable speed, illustrated°, Nov. p.90
Lead-base bearing metals announced°, July p.108
Leakage, hydraulic, can be controlled, Aug. p.70
Liberty ship and standardization, Nov. p.142
Lighting:
engineering department, importance of, in, March p.54
fluorescent, for inspecting parts°, Nov. p.65
inspection of bottled beverages by°, Aug. p.68
pilot assemblies available°, July p.110
polarizing screens for, in airplane cockpit°, Feb. p.61
self-dousing for blackouts°, March p.42
Linkages, graphical solution of, simplified, May p.68
Lubrication:
ball bearing, suitable greases for, March p.82
bearing design for, Sept. p.84
centralized, automatic, on milling machine°, Aug. p.98
centralized, for bearings°, Feb. p.100
colloidal graphite, for general purposes°, Aug. p.126
cups, grease, high-pressure°, March p.96
graphited oil for lubricating°, Feb. p.110
knitting machine, system in°, Feb. p.68
lubricator, constant level°, July p.112
pumps for, on transmission mechanism°, May p.134
Lags, cable, for aircraft use, announced°, July p.102, Sept. p.118

M, N

Machine Drives and Controls Supplement, April p.65
Machine tool power requirements, calculating, June p.79
Machine tool surface speed held constant°, June p.148
Machinery, portability of, extends application°, Sept. p.60
Manganese steel welding rod conserves nickel°, July p.106
Marine unit, gear changes eliminated in°, March p.80
Marking machine, for fuses and other conical parts°, June p.85
Materials, directory of, Oct. p.81
Materials (*see also specific types: Steel, Plastics, etc.*):
conserving of, in plants, April p.64
critical war, scarce°, June p.152
lead-base bearing metals and tin-base babbitts°, July p.108
metallic, separation by electrostatic principle°, Aug. p.68
spring, selection of, Nov. p.87
substitute, in design of gears°, Nov. p.66
substitute, replacements, alternatives for, Feb. p.73
substituting of, in design, June p.55
tests reveal stress raiser effects in, Dec. p.104
Materials, wartime, conservation of Part I—Aug. p.63; Part II—crystalline structure, Sept. p.70; Part III—iron and carbon, Oct. p.69; Part III—quenched and tempered carbon steel, Nov. p.82; Part V—hardenability, Dec. p.91
Mechanisms (*see also under Braking, Cams, etc.*):
adjusting, on forging machine°, Feb. p.60
cam, on high-cycle milling machine°, Feb. p.60
heat-controlled cooling of refrigerator compartment°, Feb. p.61
reciprocating, for scale graduations°, Jan. p.120
vernier adjustment, patent for°, Feb. p.130
Metal show, war theme dominates at, Nov. p.78
Metal-forming machine illustrated and described°, July p.81
Metallizing of bearings to produce exact characteristics°, Dec. p.90
Metallurgy, how deep-drawing affects, Jan. p.60
Metallurgy, wartime, conservation of strategic materials, Part I—Aug. p.63; Part II—crystalline structure, Sept. p.70; Part III—iron and carbon, Oct. p.69; Part IV—quenched and tempered carbon steel, Nov. p.82; Part V—hardenability, Dec. p.91
Metals, electrographic analysis of°, March p.42
Metals, substitutes for various, list of, Jan. p.71
Microscope, measuring, accuracy of°, July p.60
Milling Machine:
for airplane engine connecting rod caps°, March p.75
for milling, drilling or boring°, Dec. p.117
high cycle, cam mechanism on°, Feb. p.60
portable type°, Nov. p.64
planetary, hydraulic, illustrated°, April p.121
precision, of special design°, Sept. p.88
semi-automatic, full hydraulic drive°, April p.121
thread, illustrated°, April p.120
three-spindle rotary type°, Nov. p.91
turret, combination vertical and horizontal°, May p.83
universal hob thread, illustrated°, June p.85
vertical, hydraulic°, May p.83
Mixer, concrete, mobile, illustrated°, Oct. p.205
Models aid in training students°, July p.59
Molders of plastics, list of, Oct. p.186
Molding:
compression molding, machine for°, March p.74
injection, compression, discussed, Jan. p.47
plastics, basic do's and don't's, in, Jan. p.47
typewriter ribbon spools, injection molded°, May p.88
Mosquito boat, PT-32, illustrated and described°, Jan. p.71
Motorcycles, for war use, illustrated°, Feb. p.84
Motors:
all-round protection, announced°, March p.90
direct-current, for aircraft°, Aug. p.128
electric, small, for aircraft°, Sept. p.112
fan, in three models°, March p.100
Motors, fractional horsepower, for aircraft°, Feb. p.96, April p.178
Motor-generator set for brazing or hardening°, March p.74
Motors, hydraulic (*see also Hydraulics*):
for military applications°, Aug. p.122
Motors, loading can be determined by ammeter°, Dec. p.90
Motors, miniature, fitting of, to the job, April p.117
Motors, polyphase induction, announced°, Oct. p.224
Motors, selection of, to help in conserving°, Sept. p.54
Motors, shaded-pole, where they fit, Nov. p.79
Motors, streamlined integral, polyphase°, Feb. p.94

°Denotes short articles of less than one page.

Motors, Triple-clad types introduced°, April p.186
Mountings, Rubber:
design data for (data sheets), May p.85
designing, under shear (data sheets), April p.173
flexible, in blower°, Dec. p.142
simplifying design of, Jan. p.66
vibration isolation of engine by°, May p.88
Mountings, strain-relieved, for military glasses°, July p.58
Mower, drive designed for minimum maintenance, April p.115
Mower, grass blitzer, for airfields°, April p.45
Nameplate substitutes for metals°, June p.130
National emergency steels conserve vital alloys, July p.65
Nickel, production of, increased for war°, Jan. p.38
Nozzles, diesel injection, accuracy determined°, Nov. p.63
Nuts (*see Fastenings, Nuts*):

P

Packings (*see also Seals*):
gasket, leather, introduced°, Feb. p.102
rayon replaces, flax°, Dec. p.122
rotary, with nonmetallic seal nose°, March p.94
synthetic rubber°, Feb. p.100
Paints:
fluorescent, for aircraft dials°, April p.46
low visibility, for war equipment°, April p.192
machine tool, war department standards°, May p.52
vulcanizer, interior, fast-drying°, June p.130
Paper pulp material announced°, Oct. p.56
Patents:
accelerometer, uniform scale graduations of°, Jan. p.120
air utilized to drive gyroscope rotor°, Jan. p.124
bimetal coils control gages°, Feb. p.138
booster mechanism, on textile loom°, May p.128
brake, self-acting, patented°, Oct. p.250
brake system, hydraulic, simplified°, April p.206
cam, changes in direction of displacement of°, March p.118
cam mechanism slackness taken up by device°, July p.126
clutch, impact, patented°, Sept. p.132
clutch linings renewed, patent for°, Dec. p.160
clutch, combined slip and positive°, April p.210
control maintains constant driven speed°, Nov. p.138
control systems for copying operations on machines°, Jan. p.118
conveyor, screw, for straight run°, Feb p.132
crankshaft vibration dampened by device°, Sept. p.134
damper for vibration on crankshaft°, Dec. p.158
gear mechanism, reduction of°, Oct. p.250
government clause, "save harmless" discussed°, Feb. p.56
governor and pump control speed for diesel engine°, March p.122
gyroscope speed regulated by device°, Oct. p.248
intermittent drive, patented°, Nov. p.136
legislation affecting wartime inventions, Feb. p.55
patent legislation, wartime procedure, Sept. p.75
protection of war-inspired patents°, Feb. p.55
pulleys, guide, adjustable for control cables°, Aug. p.146
pump, rotary, for lubricating transmission°, May p.134
reel winder, tension controlled°, Aug. p.142
screw tightener has two speeds°, July p.124
shock absorbers, mass of balls replaces fluid°, July p.128
sleeves, renewable on rotary pump shafts°, Dec. p.158
stamping seals absorber effects cost, decrease°, March p.120
timing-shaft adjustment provided°, Sept. p.136
valves, sticking prevented by device°, July p.134
variable speed drive provides overrunning clutches°, June p.144
variable stroke for toggle presses°, Aug. p.144
vernier adjustment°, Feb. p.130
Pencil with plastic ferrule announced°, April p.194
Phone-switch for communication systems°, Dec. p.138
Phosphate coating for sheet steel developed°, May p.50
Photocopy machine for blueprints announced°, May p.116, Dec. p.146
Photocells, dry-disk, announced°, Feb. p.104
Photoelectric dual scanner offered°, Oct. p.230
Photoelectric protection unit announced°, Sept. p.120
Photography, used in aircraft plants in drafting°, March p.49
Phototube scanner, self-contained°, March p.47
Pilot light assemblies available°, July p.110
Pipe cutting, electricaliy controlled°, April p.45
Piping and pressure vessels, determining stresses in, May p.77
Piping, thermoplastic, welding of°, Nov. p.64
Planer, double-housing, has variable voltage control°, June p.84
Plastic molders, listed, Oct. p.186
Plastic Molding:
basic do's and don't's in, Jan. p.47
for purification equipment°, Oct. p.206
new process°, Jan. p.38
types and technique of, Jan. p.48
Plastic parts in hydraulic pump°, July p.98
Plastic plywood becomes war material, July p.53
Plastic supports announced°, Sept. p.104
Plastic Tubing:
flexible, announced°, Jan. p.82
seamless, extruded, transparent°, April p.188
transparent for aircraft°, July p.106
transparent offered°, July p.96
Plastic, welding of thermoplastic piping°, Nov. p.64
Plastic, wood-base thermoplastic announced°, Oct. p.230
Plastics:
aluminum replaced by plastics in wheel and dial°, Aug. p.98
cold-molded, in design, Nov. p.75
conduit is plastic covered°, Nov. p.116
cost factors governing design for, March p.70
directory of tradenamed, Oct. p.152
ferrule, on pencil°, April p.194
films for details of metal surfaces°, Aug. p.60
finish, transparent, temporary, for metal°, Aug. p.110
metal-like, replaces foil°, Feb. p.52
metal plating of°, Feb. p.52
phenolic molding resins, announced°, March p.98, June p.108, July p.50, July p.114, Sept. p.120
polarizing screens for cockpit lights°, Feb. p.61
Platinum, uses of, in industry°, Feb. p.52
Plywood, impregnated, becomes war material, July p.53
Pneumatics:
arbor expanded by compressed air°, Dec. p.122
circuit breaker, for resistance welding units°, April p.178
clamp, miniature, for aircraft°, Dec. p.130
compressed air operates circuit breakers°, Nov. p.144
coal conveyed to furnace by pneumatics°, Nov. p.56
crane, air-controlled, described°, July p.81
dual drive, speeds typewriter operation, April p.69
gyroscope rotor driven by°, Jan. p.124
pump, small midget, explosion-proof°, Jan. p.96
vacuum chamber for testing turbosupercharger rotors°, May p.57
welder, seam, driven by air cylinder°, July p.82
Polisher, cylindrical, illustrated°, March p.74
Porcelain used for parts°, June p.62
Potentiometers and rheostats developed°, Nov. p.120
Powder Metal:
method for analyzing°, Sept. p.54
porous iron bearings conserve copper°, Feb. p.96
press designed for parts of, Oct. p.59
Power requirements for machine tools, June p.79
Presses:
cheese, all-metal, illustrated°, Oct. p.204
deep-drawing, metal, illustrated°, Dec. p.116
double-acting, hydraulic, draw°, Dec. p.117
flanging and forming°, June p.84
for heading cartridge cases°, April p.120
for powder metal parts°, Oct. p.59
forging, all-hydraulic, announced°, July p.82
hydraulic, for aircraft production°, March p.74
hydraulic forming and flanging°, June p.84
inclinable, 150-ton, illustrated°, Dec. p.116
piercing, 500-ton, of cast steel°, Sept. p.88
straightening, pressing and assembling°, Nov. p.90
V-belt driven, illustrated°, May p.82
Pressure Vessels:
design of, June p.63
stress determination in, April p.59
Pressures, multiple, measured in aircraft engine°, Aug. p.98
Pulleys:
guide, adjustable for control cables°, Aug. p.146
tight-end for conveyors°, Sept. p.108
variable, for transmission°, Jan. p.88
Pump impeller and housing of glass°, Aug. p.85
Pumps:
air-powered, small midget, explosion-proof°, Jan. p.96
auxiliary, hand, hydraulic uses plastics°, July p.98
controls for, single and double pole°, June p.116
fluid, centrifugal, application of, April p.55
fluid, line standardized°, Nov. p.120
fluid, positive displacement°, Aug. p.124
horizontal, opposed design of°, Oct. p.204
rotary, centrifugal action in°, July p.59
rotary, direct-connected, standard line of°, April p.182
rotary, renewable sleeves for shafts of°, Dec. p.158
squeegee, for pumping different materials°, Jan. p.46
variable delivery, high pressure°, March p.94
variable delivery, redesigned°, Nov. p.114
Pumps, Coolant:
adaptable to machine tools°, Oct. p.230

°Denotes short articles of less than one page.

centrifugal, hydraulic, March p.104
flange-mounted, announced°, Sept. p.110
for either thick or thin coolants°, Oct. p.214
hydraulic, for machine tools°, March p.102
immersion, for handling abrasives°, Sept. p.114
portable, for 24-hour use°, Dec. p.144
self-priming°, Nov. p.118
Purification equipment has transparent parts°, Oct. p.206
Pursuit planes, illustrated and described°, Feb. p.85
Pushbutton:
pull-push stations, announced°, Sept. p.106
stations and enclosures announced°, Feb. p.102

R

Radio transmitter and receiver, like phone°, March p.48
Radiographic examination of plate and casting°, Oct. p.63
Railway coaches, pendulum suspension for°, March p.47
Rayon replaces flax in mechanical packings°, Dec. p.122
Reel winder is tension controlled (patent)°, Aug. p.142
Refrigeration:
applied to electrodes°, March p.80
controls for, cold anticipation principle°, March p.98
radial compressors in°, Dec. p.116
Refrigerator, heat-controlled cooling for°, Feb. p.61
Regulator, hydraulic pressure, announced°, July p.114
Relay-contactor, magnetic, announced°, June p.104
Relays, Aircraft:
announced°, Oct. p.226
continuous duty°, Dec. p.140
dust-tight°, Dec. p.128
for severe vibration conditions°, May p.110
for vacuum tube output circuits°, July p.96
four-pole, lightweight°, July p.100
light in weight°, Oct. p.224
lightweight, announced°, May p.108
midget, light°, Feb. p.104
remote control, for electrical circuits°, Dec. p.124
specially built°, Dec. p.126
vibration resistant°, Feb. p.94
Relays, Mercury:
for blackout applications°, June p.108
plunger, silent, announced°, April p.190
time delay, for communication systems°, Dec. p.130
Relays, power, highly sensitive°, Jan. p.94
Relays, time delay, industrial, announced°, Jan. p.86
Relays, vacuum, lightweight, switching°, Aug. p.120
Resistors:
ferrule type, for military purposes°, Sept. p.106
vitreous enamel strip°, Nov. p.118
Rheostats:
aircraft, lightweight, durable°, June p.116
range of cages for, announced°, March p.92
solid rectangular contacts in°, Nov. p.114
wattage increased in°, Oct. p.232
Rifle machine, control and drive of°, Feb. p.89
Rivets:
blind, self-plugging, take many forms°, Jan. p.46
holes, dimpled, announced°, Aug. p.122
Rods, Welding:
low temperature°, July p.100
manganese steel, conserves nickel°, July p.106
Rubber, chlorinated, for coating°, March p.42
Rubber, hard sponge, produced°, June p.106
Rubber, Mountings:
design data for (data sheets), May p.85
designing under shear (data sheets), April p.173
simplifying design of, Jan. p.66
vibration isolation of engine by°, May p.88
Rubber, Synthetic:
for sealing°, Jan. p.84
how it meets current demand, July p.76
packings of°, Feb. p.100
Rubber, vibration isolation through use of, Feb. p.77
Rustproof coating for metal announced°, March p.104

S

SAE steel classifications, a list of, Oct. p.150
Sand grains determine hardness, Feb. p.82
Scale, propeller balancing, illustrated°, Sept. p.88
Scanner, dual, photoelectric, announced°, Oct. p.230
Screening or sizing operations, rotating cam controlled°, April p.46
Screens:
polarizing, for lights in cockpits°, Feb. p.61
selecting of, considerations in, March p.61
Screw tightener has two speeds°, July p.124
Searchlight and sound detector illustrated°, Feb. p.84
Seals (*see also Packings*):
balanced pressure of, for bearings°, July p.108
gaskets, leather, introduced°, Feb. p.102
rotary, with nonmetallic seal nose°, March p.94
synthetic rubber°, Feb. p.100
synthetic rubber, announced°, Jan. p.84
Servo circuits, hydraulic, in machines, April p.122
Shaver, gear, for war production°, March p.75
Shear, electric, redesigned to conserve materials°, July p.81
Sheave with speed variations°, Oct. p.212
Sheaves, wood replaces metal in°, July p.104
Ship, Liberty, and standardization, Nov. p.142
Shotblasting and grinding heat-treated springs°, Sept. p.96
Shrimp cleaning machine described°, March p.48
Shrink-fits, designing for, Part I—June p.68; Part II—July p.72; Part III—Fatigue Stresses, Aug. p.79
Signal warns of failure due to strain°, July p.60
Silver:
electrolytic polishing of°, July p.50
for current-carrying parts°, March p.42
replacement uses of°, June p.83
Siren control for turning on and off°, June p.104
Siren design, discussion of, Sept. p.57
Slot insulations, new thin type°, June p.112
Solenoid:
contactor, for remote control, announced°, Dec. p.138
hard-faced, welded, announced°, Jan. p.82
how to select for use in machines, April p.113
laminated type, for industrial applications°, Feb. p.108
Sound detector and searchlight illustrated°, Feb. p.84
Spectograph segregates gas molecules°, July p.90
Speed constant on surface of machine tool°, June p.148
Speed, constant, maintained by patented device°, Nov. p.138
Spraying and washing machine for metal°, June p.85
Springs:
all-weather, unaffected by temperature°, Jan. p.92
beryllium copper, brush, developed°, Jan. p.94
combining maximum deflection of, with minimum space, Jan. p.57
flat, in shell gage, facilitate operation°, May p.55
helical, eliminating surging in, April p.47
selection of material for, Nov. p.87
shot-blasting and grinding of heat-treated types°, Sept. p.96
statically loaded, discussed, July p.67
Stainless:
replaces brass in food-handling equipment°, May p.88
tubing, welded, offered°, Jan. p.90
Stampings:
composite, in ordnance, Dec. p.113
deep-drawing, how metallurgy affects, Jan. p.60
metal, kinds of, dictated by use in, Jan. p.60
producers of, listed, Oct. p.166
sealing means for absorber, patented°, March p.120
simplified operation of press for°, Sept. p.61
Standards:
airplane engine, issued by S.A.E., Jan. p.80
machine tool wiring°, Sept. p.54
Starters:
electric, direct-cranking°, Oct. p.228
magnetic, reversing, alternating-current°, June p.118
Steel and wood replaces, aluminum in plane, June p.78
Steel forgings utilized for propeller blades°, Nov. p.64
Steel in shell cases, free from spark hazard°, Aug. p.54
Steel, seamless tubing, processed into propeller blades°, Aug. p.69
Steel, spring, utilization of, for armor plate°, Feb. p.52
Steel, Stainless:
replaces brass in food-handling machines°, May p.88
tubing, welded, announced°, Jan. p.90
Steel, tests reveal stress raiser effects, Dec. p.104
Steel, water-hardening, announced°, Oct. p.222
Steel, zinc-plated, offered as substitute°, Dec. p.124
Steels:
alternatives for alloy, available°, March p.53
electrolytic process for plating strip°, Aug. p.60
NE alloy, available°, Aug. p.122
SAE, list of standard classifications, Oct. p.150
substitutes for galvanized coatings for, Jan. p.80
Strain gages, how to apply, May p.66
Strain measuring, on machine parts°, July p.61
Stretcher, metal, forms aircraft parts by clamping°, June p.62
Stresses:
code for working, facilitates design, Part I—static stresses, Nov. p.71
Part II—fatigue stresses, Dec. p.99

°Denotes short articles of less than one page.

designing for bending, twisting and axial loads, Part I—static stresses, Sept. p.79; Part II—fatigue stresses, Oct. p.78
determining of, in piping and pressure vessels, May p.77
raiser effects revealed by tests, Dec. p.104
strain gages to apply to measure of, May p.66
Submarine, Thresher, illustrated and described°, Jan. p.71
Supports employ plastic with rubber°, Sept. p.104
Surface-hardening machine, automatic, illustrated°, Aug. p.90
Surfacer, cabinet, accuracy permitted by control°, Sept. p.88
Switches:
actuator, for aircraft, offered°, July p.98
actuator, for precision snap switch°, Nov. p.110
actuator, panel mounted, for aircraft°, Jan. p.88
aircraft, for limited space°, June p.116
aircraft thumb for tanks, etc.°, June p.104
aircraft, wide contact spacing°, April p.180
blackout control, door-operated°, June p.130
direct current, snap-action type°, Dec. p.124
explosion-proof, dust-tight, offered°, Jan. p.90
limit, dwells in hydraulic system provided°, Nov. p.65
limit, of rotating type°, March p.90
limit, small precision, announced°, July p.94
limit, lightweight, for aircraft°, Aug. p.108
mercury, glass, single or double-throw°, Jan. p.92
midget, light, small, announced°, Aug. p.112
multicircuit, for aircraft, announced°, Sept. p.110
phone, for communication systems°, Dec. p.138
pressure, for compressors, Feb. p.94
pump control, electric, announced°, Jan. p.96
signal alarm, A-C, D-C°, June p.126
snap-action, metal-clad, moisture-resistant°, June p.110
time, 24-hour, single-cycle, announced°, May p.112
Swivel, straight and 90-degree angles, offered°, Oct. p.220
Synthetic rubber meets demand, July p.76
Synthetics increase demands on pressure vessels, June p.63

T, U

Tanks:
amphibian, described and illustrated°, Jan. p.72
heavy, illustrated°, Feb. p.85
medium, streamlined for protection, April p.164
Tapping Machine:
precision, illustrated°, Dec. p.117
radial, for high production°, July p.81
radial, illustrated°, Oct. p.205
Textile loom, booster mechanism on, patent for°, May p.128
Textile machine, constant cloth tension in°, Oct. p.206
Thermocouple control measures surface temperature°, Oct. p.63
Thermostats:
adjustable, for electrically-heated cabinets, etc.°, March p.100
duplex, announced°, Nov. p.110
explosionproof, announced°, Nov. p.124
pressure types, selection of, Sept. p.66
selection of, Part I—bimetals, pyrometers, Aug. p.70; Part II—pressure types, Sept. p.66
Thermostatic bimetal developed°, June p.114
Thermoswitch, coupling head, announced°, Sept. p.112
They Say . . . . April p.228, June p.154, Sept. p.130
Tightener, screw, has two speeds, patent for°, July p.124
Timers:
cycle progress, improved°, Dec. p.144
explosion proof, time delay relay°, Aug. p.108
gear unit in, discussed°, June p.60
vernier-set, for controlling operations°, Oct. p.238
welding sequence, announced°, May. p.108
Timing-shaft adjustment provided (patent)°, Sept. p.136
Tires, molded compound, industrial°, Aug. p.128
Torque measuring mechanism in instrument°, Dec. p.89
Tractor, four-wheel knuckle steer°, Sept. p.88
Training of designers aided by visual models°, July p.59
Transformer, indoor current, announced°, Nov. p.106
Transmission (*see also Variable Speed, Hydraulic, etc.*):
all-electric, adjustable, obviates change of gears°, Feb. p.89
Truck, heavy-duty, battery or gas-electric°, Aug. p.90
Truck-tractor, with three machine guns, illustrated°, Feb. p.84
Tubing:
aircraft, transparent, for insulation°, July p.106
for electrical insulation°, April p.186
plastic, transparent, large°, July p.96
plastic, flexible, announced°, Jan. p.82
seamless steel, processed into propeller blades°, Aug. p.69
seamless, transparent, extruded°, April p.188
stainless, welded, developed°, Jan. p.90
steel, used in auto body by Ford°, May p.50
Typewriter, dual pneumatic drive in, speeds operation, April p.69
Typewriter ribbon spool covers, injection molded°, May p.88
United States Government:
field offices for contract distribution, Feb. p.112
priorities field service, March p.106
Universal joints, velocity and acceleration analysis of, Nov. p.93

V

Vacuum chamber for testing turbosupercharger rotors°, May p.57
Valve control simplifies casting machine operation, April p.110
Valve, motor-operated, for controlling water, etc.°, Aug. p.118
Valve, relief, for aircraft hydraulic systems°, Aug. p.120
Valves:
electric, for mobile equipment and vibrating units°, Feb. p.98
electric-magnetic, portable°, Sept. p.104
flanged, silent check, announced°, Oct. p.214
hydraulic, balanced, for high pressure°, April p.188
hydraulic, control fluid flow°, Nov. p.124
hydraulic, for aircraft, midget°, Dec. p.128
hydraulic, 4-way, announced°, Oct. p.212
hydraulic, reduce weight in aircraft°, Jan. p.46
hydraulic, solenoid-operated, in machine°, Feb. p.89
sticking prevented in (patent)°, July p.134
three-way, magnetic, redesigned°, Nov. p.106
three-way, magnetic, redesigned°, Nov. p.106
Variable Speed Transmission:
alternating current drive in band saw, April p.162
basis for selecting, May p.71
for machines, announced°, Aug. p.108
hose assemblies for, of plastic°, Oct. p.206
positive, announced°, June p.144
pulley control for°, Jan. p.88
Variable stroke for toggie presses (patent)°, Aug. p.144
Varnish:
flame-resistant, insulating°, Oct. p.238
insulating, for electrical apparatus°, June p.128
V-belt Drive:
controls strip tension, April p.160
for armored vehicles announced°, Nov. p.124
for armored vehicles, utilizes steel wire°, Dec. p.138
dry cleaning unit utilizes°, Feb. p.154
Veneer cutting machine, hydraulic control of°, June p.150
Vernier adjustment, patent for°, Feb. p.130
Vessels, pressure, synthetics increase demands on, June p.63
Vibration:
crankshaft, dampened by device°, Sept. p.134
damper for diminishing of, patented°, Dec. p.158
isolation of, through use of rubber, Feb. p.77
linear, applying mobility method to, March p.57
shaft, applying mobility method to, Feb. p.62

W, Z

Washers, look, custom-made, announced°, April p.180
Washing and spraying machine for metal°, June p.85
Welder, Resistance:
control for, announced°, May p.106
illustrated°, May p.83
war needs, speeded by, July p.61
Welder, rocker arm, operated by foot, air or motor°, Sept. p.88
Welder, seam, air cylinder furnishes power°, July p.82
Welder, shell, automatic, illustrated°, April p.120
Welder, shield-arc, junior, illustrated°, Aug. p.90
Welder, spot welding, illustrated°, Nov. p.90
Welding:
bearings are spot welded°, July p.104
electrodes, refrigeration applied to°, March p.80
flash methods for production of army tanks°, June p.52
gun, Bofors, production speeded by, Dec. p.83
machine speeds resistance welding, July p.61
oxyacetylene cutting tips, at high speed°, Feb. p.89
rods, low temperature, developed°, July p.100
rods of manganese steel conserve nickel°, July p. 106
solenoids, to eliminate plunger "mushrooming,"° Jan. p.82
thermocouple control of surface temperatures°, Oct. p.63
thermoplastic piping is welded°, Nov. p.64
timer, sequence, announced°, May p.108
Wheelabrator, portable, for blast room°, Aug. p.90
Wheels:
all-purpose resinoid, for trucks°, July p.112
wooden, truck, heavy-duty°, Aug. p.130
Whiteprint machine for engineering department°, Jan. p.98
Winder, reel, is tension controlled°, Aug. p.142
Wood-base thermoplastic announced°, Oct. p.230
Wood replaces metal in sheaves, July p.104

Zinc, electroplated on steel, as substitute°, Dec. p.124

°Denotes short articles of less than one page.